

REMARKS

This Reply is accompanied by a Request for Continued Examination (RCE) pursuant to 37 CFR 1.114.

In view of the foregoing amendments and following remarks, reconsideration and allowance of this patent application is earnestly solicited. Claims 1 and 3-15 stand finally rejected. Claim 2 was previously canceled. Claims 1, 3-7 and 10 have been amended. Thus, claims 1 and 3-15 are pending in this application. No new matter has been introduced.

I. Interview Summary

Applicant's undersigned attorney, Leslie Nguyen, would like to thank Examiner Devito for the courtesies extended during the telephonic interview conducted on May 21, 2010, in the present application. During the interview, Applicant's undersigned attorney presented arguments further to the Reply To Office Action Mailed December 28, 2009, focusing on the cited Leiber reference. The Examiner maintained that Leiber discloses permanently shutting off a defective or failed compressed air load circuit. The Examiner also maintained that, in the alternative, if Leiber did not disclose permanently shutting off a defective or failed compressed air load circuit, it would have been obvious to one of ordinary skill in the art to modify Leiber to effect this function in order to improve functionality of the compressed vehicle compressed air system and increase safety.

II. Detailed Response

In the Office Action, the Examiner objected to claim 6 under 37 CFR 1.75(c). Specifically, the Examiner contends that claim 6 cannot recite having at least one defective and at least one non-defective circuits because claim 1 recites "at least one compressed air circuit" allowing for the possibility of only one air circuit. Applicants submit that this claim rejection is moot in view of the current amendment to claim 6. Accordingly, Applicants submit that claim 6

is in proper dependent form and respectfully requests that the Examiner withdraw the objection to claim 6.

Turning now to the substantive rejections, the Examiner rejected claims 1 and 3-7 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,484,784 ("Leiber"). In the alternative, the Examiner rejected claims 1 and 3-7 under 35 U.S.C. §103(a) as being obvious over Leiber. Applicants respectfully traverse these claim rejections for the reasons set forth hereinafter.

As set forth in detail in the present application, Applicants' claimed invention is directed to embodiments of an improved method and system for detecting defective or failed compressed air load circuits in a vehicle compressed air system. Pressure is measured in compressed air load circuits and evaluated in an electronic control unit, which briefly shuts off the one or more compressed air load circuits, measures pressure values and/or determines pressure gradients during the shutoff time and compares the pressure values and/or gradients with a respective threshold value. Any circuits detected as defective or failed are identified and permanently shut off. The present claimed invention advantageously minimizes large energy loss in the compressed air system in the event of a circuit failure. Independent claim 1 has been amended to more clearly claim the foregoing.

Leiber describes embodiments of a dual-circuit brake system having a single, central pressure sensor for monitoring and diagnosing a plurality of functional data such as switching times and pressure gradients of an anti-skid braking apparatus. When the sensor detects a pressure difference between the two brake circuits, a magnetic valve can be triggered in order to prevent failure of the pressure supply.

Leiber does not disclose, teach or suggest detecting a defect or failure in a vehicle compressed air system whereby compressed air load circuits are momentarily shut off in order to

allow pressure values to be measured or pressure gradients to be determined then compared to a respective threshold value or gradient in order to identify and permanently shut off defective or failed circuits. In contrast to the present claimed invention, Leiber discloses only that an individual circuit is shut off to allow the pressure gradient in the circuit to be measured and determined to be defective before additional circuits are tested individually. *See* Leiber at 3:38-4:32 (test cycles A, B and C). Rather than shutting off and testing each individual circuit in series like Leiber, the present claimed invention shuts off and tests the compressed air load circuits in parallel. By doing so, the present claimed invention advantageously minimizes large energy loss in the compressed air system because all circuits are momentarily shut off, thus preventing compressed air from escaping from the system via one or more defective or failed air circuits while the testing function is being performed. The Leiber system is disadvantageous in contrast because, while each test cycle is performed individually, compressed air may escape from the system via one or more defective or failed air circuits before being identified in the series.

Additionally, Leiber does not disclose, teach or suggest permanently shutting off the defective or failed compressed air load circuit. The Examiner asserts that the recitation “blocked off” with respect to defective brake circuits in Leiber without indication of reopening the circuits qualifies as necessarily permanent. *See* Leiber at 4:40-45. Applicants respectfully disagree and submit that blocking off certain brake circuits for a limited time, teaches away from permanently shutting off defective or failed circuits. *See, e.g.,* Leiber at 3:24-30. To “block” off a circuit implies temporarily impeding the passage of compressed air within the circuit. Without explicit language to indicate that such impedance is permanent, which contrasts to the recitation in the present application claims, Applicants respectfully submit it is not proper to infer that the recitation “blocked off” in Leiber is necessarily permanent.

The Federal Circuit has instructed that anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration. See *W.L. Gore & Assocs. v. Garlock, Inc.*, 220 USPQ 303 (Fed. Cir. 1983) (emphasis added), *cert. denied*, 469 U.S. 841 (1984); see also *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 221 USPQ 481, 485 (Fed. Cir. 1984) (requiring that the prior art reference disclose each element of the claimed invention arranged as in the claim). Considering that the method of the present invention as claimed in independent claim 1 differs from the braking method disclosed in Leiber, as discussed above, it is respectfully submitted that claim 1 is patentable over this reference. Notice to this effect is earnestly solicited.

It is submitted that claims 3-7 are also allowable by virtue of their respective dependencies from claim 1, as well as for the additional features and steps recited therein. Notice to this effect is also respectfully requested.

As to the rejection of claims 1 and 3-7 as obvious over Leiber, as discussed above, there is no description in Leiber whatsoever of detecting a defect or failure in a vehicle compressed air system whereby a plurality of compressed air load circuits are momentarily shut off in order to allow pressure values to be measured or pressure gradients to be determined then compared to a respective threshold value or gradient in order to identify and permanently shut off defective or failed circuits. Applicants respectfully submit that it would not have been obvious to one of ordinary skill in the art to modify Leiber to allow for a plurality of compressed air load circuits to be shut off because Leiber clearly discloses separate and distinct test cycles for each circuit. Furthermore, Applicants respectfully dispute the Examiner's contention that it would have been obvious to one of ordinary skill in the art to "leave the failed circuit closed to prevent unnecessary waste compressed air" in view of the disclosure in the present patent application of permanently shutting off a defective or failed compressed air load circuit to

minimize energy loss (*see, e.g.*, paragraph [0003] of the present published application).

Accordingly, Applicants submit that, absent the present application for patent, a person of ordinary skill in the art would not perceive a disclosure of the present invention in Leiber. By taking in hindsight knowledge of the present invention and attributing elements thereof to Leiber to present claim rejections under 35 U.S.C. § 103(a) when the cited art does not contain or support the knowledge, it is respectfully submitted that the claimed invention is impermissibly being used as a blueprint for its own reconstruction.

The Examiner also rejected claims 8-15 under 35 U.S.C. §103(a) as being obvious over Leiber in view of EP 0477519 (“Wrede”). Applicants respectfully traverse these claim rejections for the reasons set forth hereinafter.

The Wrede reference cited in combination with Leiber does not overcome the deficiencies of Leiber. Wrede describes embodiments of an electronic brake system capable of self-testing for conditions such as tightness or lining wear. Large degree sensors and signal generators are used to measure signals for calculating a normalized pressure drop by a control unit. Wrede is cited primarily for its disclosure of a compressed air supply part that includes a compressor.

Like Leiber, Wrede nowhere discloses, teaches or suggests a system and method for detecting a defect or failure in a vehicle compressed air system whereby a plurality of compressed air load circuits are momentarily shut off in order to allow pressure values to be measured or pressure gradients to be determined then compared to a respective threshold value or gradient in order to identify and permanently shut off defective or failed circuits.

Accordingly, it is submitted that the combination of Leiber and Wrede does not yield the present claimed invention. Applicants submit that claims 8-15 of the present application recite features

and structure nowhere found in Leiber and Wrede, and, thus, are patentable over these cited references, whether taken alone or in combination. Notice to this effect is respectfully requested.

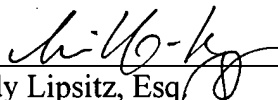
It is further submitted that claims 9-15 are also allowable by virtue of their respective dependencies from claim 8, as well as for the additional features and structure recited therein. Notice to this effect is also respectfully requested.

On the basis of the foregoing amendments and remarks, Applicants respectfully submit that this application is in condition for immediate allowance, and notice to this effect is respectfully requested. The Examiner is invited to contact Applicants' undersigned attorneys at the telephone number set forth below if it will advance the prosecution of this case.

No fee is believed due with this Response other than the \$810.00 fee for the RCE and the \$130 fee associated with the Petition for a one month extension of time submitted herewith. Please charge any fee deficiency and credit any overpayment to Deposit Account No. 50-0540.

Respectfully submitted,

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